

ARE THE DISTINCTIONS OF DELISSEA VALID?

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Two of the accepted, closely related Hawaiian genera of Lobeliaceae are Delissea and Cyanea, both described by Gaudichaud in the same book. Delissea included three species, D. subcordata, D. undulata, and D. acuminata, but the last of these has been removed and is now classified as Cyanea acuminata (Gaud.) Hillebr. Gaudichaud characterized the genus Delissea by having the calyx 5-dentate, with leafy lobes; and with only the two lower anthers bearded. Hillebrand (1888) with many more species and with field knowledge of the two groups, redefined the genera. In Delissea he had seven species, including D. subcordata and D. undulata of Gaudichaud. As generic distinctions, he listed: seeds white, wrinkled; corolla white, with a dorsal, and often with two lateral knobs; and the leaves fleshy. Rock (1919) maintained Delissea with similar characterization and the same seven species, but described the seeds as grayish white and dropped the fleshy leaves as a character. Skottsberg (1926) noted for D. undulata that the fresh, ripe seeds were light grayish or brownish lilac. Wimmer (1956) accepted Delissea and characterized it as did Rock, and included eight species.

Cyanea was published by Gaudichaud, based solely on C. Grimesiana Gaud., and distinguished by the large, foliaceous calyx lobes. Hillebrand (1888) accepted Cyanea, and included 28 species. He characterized the genus as with smooth, shining seed; corolla white or purplish, without knobs; and the leaves not fleshy. Rock (1919) accepted Cyanea with the same characteristics, and included 50 species. Wimmer (1956) retained Cyanea, with 61 species, and the same characterization and wording as used by Rock.

Takeuchi has now made field observations and abundant collections of Delissea subcordata from several sites in the Waianae Mountains of Oahu. The flowers mostly had the protruding knobs or bumps, a dorsal one just below the dorsal sinus, and also two lateral ones. These protrusions are 1-1.5 mm in diameter. They are not a constant feature and flowers lacking knobs are borne in the same cymes as those with them. In any case, when dried and mounted on a herbarium sheet, the knobs are usually invisible. Fruiting specimens were also gathered. Fresh, ripe seeds had the seed coat with transverse ridges, but the surface was brownish. It is evident that the seeds which were described as white were immature ones.

Of the characters previously used as generic ones, the white color of the flower, the texture of the leaves, the white color of the seeds -- none of these are of any

value. In Delissea the seeds are cross ridged, while in some Cyanea species they are smooth. In Delissea the corollas may have 1-3 slight protruding knobs or none at all. This character is inconstant and impractical. Of all the alleged generic characters, only the nature of the seed coat remains valid. In habit Delissea and Cyanea are identical. The sole remaining character, the texture of the seed coat, is not now judged to be of generic value. Consequently, one of this pair of genera should be treated as a synonym of the other.

In an accompanying article, this needed transfer is made.

Literature Cited

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